

ASAP

Dart Aerospace Ltd.

Date: Wednesday, 06/08/2008 2:08:41 PM  
 User: Julie Lennon

## Process Sheet

SPLIT-1

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: STEP WELDMENT
Job Number	: 41038		
Estimate Number	: 12576		
P.O. Number	:	Part Number	: D3562041
This Issue	: 06/08/2008 S.O. No. :	Drawing Number	: D3562 REV E
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 1/1 Type : LARGE FAB ASSY	Drawing Revision	: E
Previous Run	: 40288	Material	:
Written By	:	Due Date	: 29/08/2008 Qty: <sup>2</sup> / <sub>5</sub> Um: Each
Checked & Approved By	: <u>JUL 08.8.06</u>		
Comment	: Est Rev:A New Issue 06-11-09 JLM Est rev B ECN 987 07.10.09 EC verified by: DD Est Rev:C ECN1048 07-12-18 DD verified by:ec Est Rev:D 08-07-28 add chemical conversion coat DD verified by:EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D2622120C	Step Extrusion
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

Qty	Part #	Description	Batch:
1	D2622-120C	Extrusion	<u>40937</u>

Check Material for any Dents or Defects

Sed 08/08/28 5

2.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
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Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622 extrusion as per Dwg D3562

2-Deburr and bevel ends for welding

Sed 08/08/27 (5)

3.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

Sed 08/08/29 (5)

4.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
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Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

HJ 08.09-03 (25)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Date: Wednesday, 06/08/2008 2:08:41 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41038

Part Number: D3562041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

5 08/08/09 (2x)

6.0

D3560041

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

ARM WELDMENT

Batch:

3 40299



SP 08.09.08 (2x)

7.0

D3560043

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

ARM WELDMENT

Batch:

3 40300

SP 08.09.08 (2x)

8.0

MS20600AD4W5

Blind Rivet



Comment: Qty.: 32.0000 Each(s)/Unit Total : 160.0000 Each(s)

Blind Rivet

batch:

3 H 108990

SP 08.09.08 (2x)

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Transfer drill Rivet holes as per dwg D3562.

2-Touch-up rivet holes with alodine as per dwg d3562

3-Rivet legs using Magnabond as per dwg D3562.

\*\*\*\*\*Ensure to wipe off any excess magnabond \*\*\*\*\*

A/R

Magnabond 6398

Batch:

H 106095

SP 08.07.08 (2x)  
SP 08.09.08 (2x)  
SP 08.09.08 (2x)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 08/09/09 (2x)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Date: Wednesday, 06/08/2008 2:08:41 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41038

Part Number: D3562041

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

D2734

Step End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D2734

End Cap

B 37179. ✓

SP 08-09-09 (4x)

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld end caps as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.

A/R Aluminum Rod M 108037

SAD 08/09/10 (2x)

2-Grind end cap welds flush as per Dwg D3562

SP 08-09-09 2x

13.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PH 08-09-10 (2)

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/09/10 (2)

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M. 08/09/10

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

8:30AM

OVEN TEMPERATURE:

320°F

FINISH TIME:

9:00AM

JU 08-09-11 (2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Date: Wednesday, 06/08/2008 2:08:41 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41038

Part Number: D3562041

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



*m 108492*

Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3562 and QSI 005 4.4

Batch: \_\_\_\_\_

*FL 08/09/11*

*(2)*

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*EF 08/09/11 (2)*

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Assembly Kit

*G-A EF 08/09/11 (2)*

20.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*08/09/12*

Job Completion



*MF 08-09-11*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng/ Proc Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3562-1, MAKE FROM EXTRUSION D2622

D3560-043 ARM WELDMENT

D3560-041 ARM WELDMENT

D3560-044 ARM WELDMENT

D3562-1, MAKE FROM EXTRUSION D2622

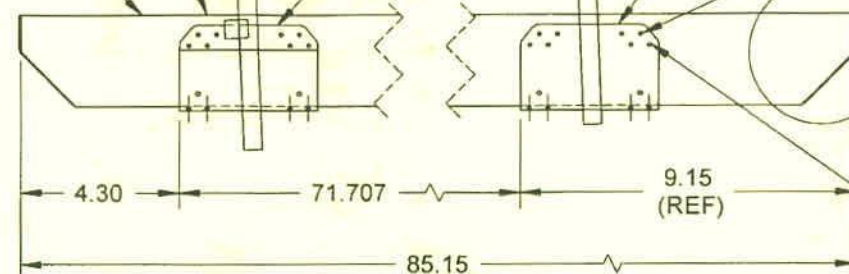
2  
APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS

2  
APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS

TRANSFER DRILL #30 DEBURR & TOUCH UP HOLES WITH CHEMICAL CONVERSION COAT BEFORE RIVETING (32 PLACES PER STEP)

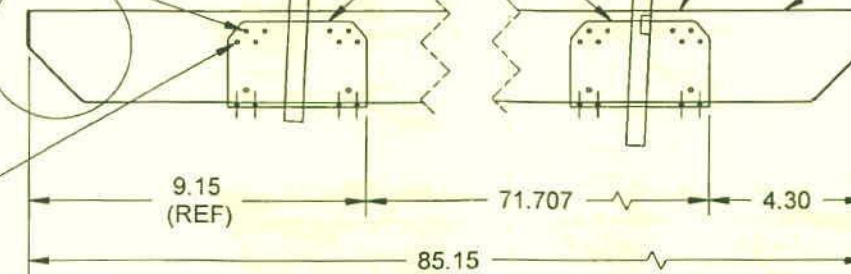
REFER TO STEP END DETAIL

INSTALL MS20600AD4W5 RIVET (32 PLACES PER STEP)



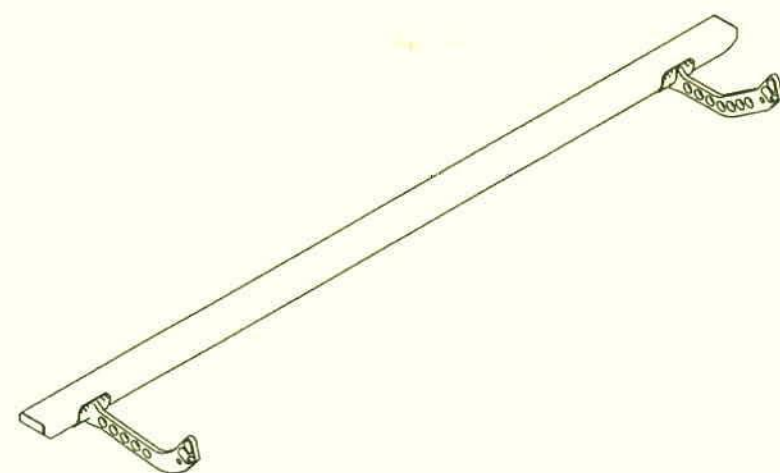
MEASURED BEFORE END CAPS WELDED IN PLACE

FWD



MEASURED BEFORE END CAPS WELDED IN PLACE

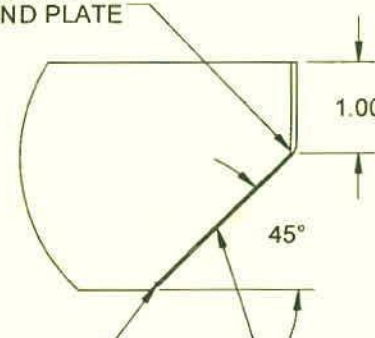
FWD



**D3562-041 LH STEP ASSEMBLY**

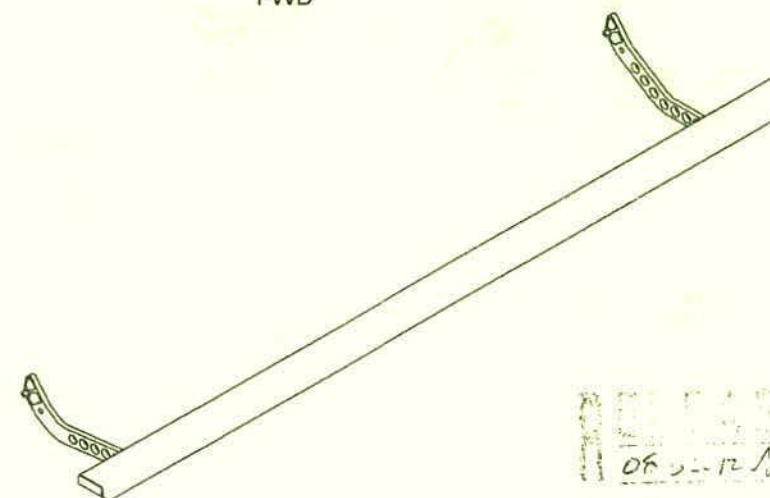
ROUND CORNER OF EXTRUSION TO MATCH BEND RADIUS OF END PLATE

NOTE: ALL WELDS SHALL BE 100% VISUALLY INSPECTED BY A QUALIFIED INSPECTOR PER DART QSI 004



D2734 END PLATE (TYP 2 PLACES)

TYPICAL STEP END DETAIL  
SCALE 1:2



**D3562-042 RH STEP ASSEMBLY**

**NOTES:**

1) MATERIAL: N/A

2) FINISH:

i) CHEMICAL CONVERSION COAT STEP EXTRUSION PER DART QSI 005 4.1 BEFORE ASSEMBLY

ii) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6) OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 8.79 lbs

8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE POWDER COATING.

9) WELDING: PER DART QSI 004

QTY -041	QTY -042	P/N	DESCRIPTION
X		D3562-041	LH STEP ASSEMBLY
	X	D3562-042	RH STEP ASSEMBLY
1		D3560-041	ARM WELDMENT
	1	D3560-042	ARM WELDMENT
1		D3560-043	ARM WELDMENT
	1	D3560-044	ARM WELDMENT
32	32	MS20600AD4W5	RIVET
2	2	D2734	END PLATE

E	ADD QTY (2) TO D2734 END PLATE ON D3562-042	PII	08.01.11
D	REMOVE D2808 SPACER NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
C	NOW MAGNOBOND, ADD D2808, REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
REV.	DESCRIPTION	BY	DATE
DESIGN	gp		
DRAWN	ef		
CHECKED	LE		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.01.11		

**DART AEROSPACE LTD**

HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. E

D3562 SHEET 1 OF 1

TITLE SCALE

STEP ASSEMBLY 1:5

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